

ABSTRACT OF THE DISCLOSURE

A method of preparing an oil sample for X-ray fluorescence analysis of the concentration of sulfur in the oil sample at a minimum limit of determination of about 10 to 30 ppb by concentrating sulfur through sedimentation or filtration. A sulfur-capturing liquid from which S is substantially removed is used, whereby S contained in an oil sample 16 is extracted, sedimented and concentrated as a silver sulfide-containing sulfur compound.